

P. ENT COOPERATION TREA

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C.20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)

09 August 2000 (09.08.00)

International application No.

PCT/GB99/03807

Applicant's or agent's file reference

SMC 60328/WO

International filing date (day/month/year)

16 November 1999 (16.11.99)

Priority date (day/month/year)

12 December 1998 (12.12.98)

Applicant

SUGARMAN, Alan, David

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

23 June 2000 (23.06.00)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. (41) 221 740 14 35

Authorized officer

Carlos Naranjo

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference
(if desired) (12 characters maximum) SMC 60328/WO

Box No. I TITLE OF INVENTION

Composition and Process for the Extraction of Metals

Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

Avecia Limited
Hexagon House
Blackley
Manchester, M9 8ZS
United Kingdom

☐ This person is also inventor.

Telephone No.

0161 740 1460

Facsimile No.

0161 721 5801

Teleprinter No.

State (that is, country) of nationality:
GB

State (that is, country) of residence:
GB

This person is applicant for the purposes of: ☐ all designated States ☒ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

B x No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

SUGARMAN, Alan David
PO Box 42, Hexagon House
Blackley
MANCHESTER M9 8ZS
United Kingdom

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:
GB

State (that is, country) of residence:
GB

This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

☒ Further applicants and/or (further) inventors are indicated on a continuation sheet.

B x No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☒ agent

☐ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

REVELL, Christopher
Intellectual Property Group
AVECIA Limited
PO Box 42, Hexagon House
Blackley, MANCHESTER M9 8ZS
United Kingdom

Telephone No.

0161 721 1142

Facsimile No.

0161 721 5801

Teleprinter No.

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Box No.V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

Regional Patent

- ☒ **AP ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SL Sierra Leone, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ **EA Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP European Patent:** AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ **OA OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

National Patent (if other kind of protection or treatment desired, specify on dotted line):

- | | | |
|---|--|---|
| <input checked="" type="checkbox"/> AE United Arab Emirates | <input checked="" type="checkbox"/> LR Liberia | |
| <input checked="" type="checkbox"/> AL Albania | <input checked="" type="checkbox"/> LS Lesotho | |
| <input checked="" type="checkbox"/> AM Armenia | <input checked="" type="checkbox"/> LT Lithuania | |
| <input checked="" type="checkbox"/> AT Austria | <input checked="" type="checkbox"/> LU Luxembourg | |
| <input checked="" type="checkbox"/> AU Australia | <input checked="" type="checkbox"/> LV Latvia | |
| <input checked="" type="checkbox"/> AZ Azerbaijan | <input checked="" type="checkbox"/> MD Republic of Moldova | |
| <input checked="" type="checkbox"/> BA Bosnia and Herzegovina | <input checked="" type="checkbox"/> MG Madagascar | |
| <input checked="" type="checkbox"/> BB Barbados | <input checked="" type="checkbox"/> MK The former Yugoslav Republic of Macedonia | |
| <input checked="" type="checkbox"/> BG Bulgaria | | |
| <input checked="" type="checkbox"/> BR Brazil | <input checked="" type="checkbox"/> MN Mongolia | |
| <input checked="" type="checkbox"/> BY Belarus | <input checked="" type="checkbox"/> MW Malawi | |
| <input checked="" type="checkbox"/> CA Canada | <input checked="" type="checkbox"/> MX Mexico | |
| <input checked="" type="checkbox"/> CH and LI Switzerland and Liechtenstein | <input checked="" type="checkbox"/> NO Norway | |
| <input checked="" type="checkbox"/> CN China | <input checked="" type="checkbox"/> NZ New Zealand | |
| <input checked="" type="checkbox"/> CU Cuba | <input checked="" type="checkbox"/> PL Poland | |
| <input checked="" type="checkbox"/> CZ Czech Republic | <input checked="" type="checkbox"/> PT Portugal | |
| <input checked="" type="checkbox"/> DE Germany | <input checked="" type="checkbox"/> RO Romania | |
| <input checked="" type="checkbox"/> DK Denmark | <input checked="" type="checkbox"/> RU Russian Federation | |
| <input checked="" type="checkbox"/> EE Estonia | <input checked="" type="checkbox"/> SD Sudan | |
| <input checked="" type="checkbox"/> ES Spain | <input checked="" type="checkbox"/> SE Sweden | |
| <input checked="" type="checkbox"/> FI Finland | <input checked="" type="checkbox"/> SG Singapore | |
| <input checked="" type="checkbox"/> GB United Kingdom | <input checked="" type="checkbox"/> SI Slovenia | |
| <input checked="" type="checkbox"/> GD Grenada | <input checked="" type="checkbox"/> SK Slovakia | |
| <input checked="" type="checkbox"/> GE Georgia | <input checked="" type="checkbox"/> SL Sierra Leone | |
| <input checked="" type="checkbox"/> GH Ghana | <input checked="" type="checkbox"/> TJ Tajikistan | |
| <input checked="" type="checkbox"/> GM Gambia | <input checked="" type="checkbox"/> TM Turkmenistan | |
| <input checked="" type="checkbox"/> HR Croatia | <input checked="" type="checkbox"/> TR Turkey | |
| <input checked="" type="checkbox"/> HU Hungary | <input checked="" type="checkbox"/> TT Trinidad and Tobago | |
| <input checked="" type="checkbox"/> ID Indonesia | <input checked="" type="checkbox"/> UA Ukraine | |
| <input checked="" type="checkbox"/> IL Israel | <input checked="" type="checkbox"/> UG Uganda | |
| <input checked="" type="checkbox"/> IN India | <input checked="" type="checkbox"/> US United States of America | |
| <input checked="" type="checkbox"/> IS Iceland | | |
| <input checked="" type="checkbox"/> JP Japan | <input checked="" type="checkbox"/> UZ Uzbekistan | |
| <input checked="" type="checkbox"/> KE Kenya | <input checked="" type="checkbox"/> VN Viet Nam | |
| <input checked="" type="checkbox"/> KG Kyrgyzstan | <input checked="" type="checkbox"/> YU Yugoslavia | |
| <input checked="" type="checkbox"/> KP Democratic People's Republic of Korea | <input checked="" type="checkbox"/> ZA South Africa | |
| | <input checked="" type="checkbox"/> ZW Zimbabwe | |
| <input checked="" type="checkbox"/> KR Republic of Korea | Check-boxes reserved for designating States which have become party to the PCT after issuance of this sheet: | |
| <input checked="" type="checkbox"/> KZ Kazakhstan | <input checked="" type="checkbox"/> CR Costa Rica | <input checked="" type="checkbox"/> DM Dominica |
| <input checked="" type="checkbox"/> LC Saint Lucia | <input checked="" type="checkbox"/> MA Morocco | <input checked="" type="checkbox"/> TZ United Republic of Tanzania |
| <input checked="" type="checkbox"/> LK Sri Lanka | | |

Precautionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

Supplemental B x

If the Supplemental Box is not used, this sheet should not be included in the request.

1. If, in any of the Boxes, **the space is insufficient** to furnish all the information: in such case, write "Continuation of Box No. ..." [indicate the number of the Box] and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:

- (i) **if more than two persons are involved as applicants and/or inventors** and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;
- (ii) if, in Box No. II or in any of the sub-boxes of Box No. III, the indication **"the States indicated in the Supplemental Box"** is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;
- (iii) if, in Box No. II or in any of the sub-boxes of Box No. III, **the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America**: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;
- (iv) if, in addition to the agent(s) indicated in Box No. IV, there are **further agents**: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;
- (v) if, in Box No. V, the name of any State (or OAPI) is accompanied by the indication **"patent of addition,"** or **"certificate of addition,"** or if, in Box No. V, the name of the United States of America is accompanied by an indication **"continuation"** or **"continuation-in-part"**: in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;
- (vi) if, in Box No. VI, there are **more than three earlier applications whose priority is claimed**: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI;
- (vii) if, in Box No. VI, **the earlier application is an ARIPO application**: in such case, write "Continuation of Box No. VI", specify the number of the item corresponding to that earlier application and indicate at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed.

2. If, with regard to the **precautionary designation statement** contained in Box No. V, the applicant wishes to exclude any State(s) from the scope of that statement: in such case, write "Designation(s) excluded from precautionary designation statement" and indicate the name or two-letter code of each State so excluded.

3. If the applicant claims, in respect of any designated Office, the benefits of provisions of the national law concerning **non-prejudicial disclosures or exceptions to lack of novelty**: in such case, write "Statement concerning non-prejudicial disclosures or exceptions to lack of novelty" and furnish that statement below.

Continuation of Box IV

FAWKES, David Melville
 KIRK, Martin John
 MAYALL, John
 NELSON, Michael Andrew
 PUGSLEY, Roger Graham
 SCHMITT, Maja
 SELLER, Alan

All of Intellectual Property Group, Avecia Limited, PO Box 42, Hexagon House, Blackley, Manchester M9 8ZS, United Kingdom

LOCKE, Timothy John

of Intellectual Property Group, Avecia Limited, PO Box 2, Belasis Avenue, Billingham, Cleveland TS23 1YN, United Kingdom

Box No. VI PRIORITY CLAIM		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application:* regional Office	international application: receiving Office
item (1) 12 Decemb r 1998 (12/12/1998)	9827288.3	GB		
item (2)				
item (3)				

☒ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): 1

* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used): ISA / EPO	Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority): Date (day/month/year) Number Country (or regional Office)
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Box No. VIII CHECK LIST; LANGUAGE OF FILING


This international application contains the following number of sheets: request : 04 description (excluding sequence listing part) : 14 claims : 03 abstract : 01 drawings : -- sequence listing part of description : 00 Total number of sheets : 22	This international application is accompanied by the item(s) marked below: 1. <input checked="" type="checkbox"/> fee calculation sheet 2. <input type="checkbox"/> separate signed power of attorney 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: 4. <input type="checkbox"/> statement explaining lack of signature 5. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): 6. <input type="checkbox"/> translation of international application into (language): 7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material 8. <input type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form 9. <input type="checkbox"/> other (specify):
---	--

Figure of the drawings which should accompany the abstract:	Language of filing of the international application: ENGLISH
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Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

For AVECIA Limited SUGARMAN, A.D.


 REVELL, Christopher

For receiving Office use only	
1. Date of actual receipt of the purported international application: 3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application: 4. Date of timely receipt of the required corrections under PCT Article 11(2): 5. International Searching Authority (if two or more are competent): ISA /	2. Drawings: <input type="checkbox"/> received: <input type="checkbox"/> not received: 6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.

For International Bureau use only
Date of receipt of the record copy by the International Bureau:

PATENT COOPERATION TREATY

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REC'D 23 MAR 2001

WIPO

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SMC 60328/WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB99/03807	International filing date (day/month/year) 16/11/1999	Priority date (day/month/year) 12/12/1998
International Patent Classification (IPC) or national classification and IPC C22B3/26		
Applicant AVECIA LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 23/06/2000	Date of completion of this report 20.03.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized officer Bombeke, M Telephone No. +31 70 340 3576 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB99/03807

I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).)*:

Description, pages:

1-14 as originally filed

Claims, No.:

1-20 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB99/03807

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	4,8,9,15,19,20
	No:	Claims	1-3,5-7,10-14,16-18
Inventive step (IS)	Yes:	Claims	4,8,9,15,19,20
	No:	Claims	1-3,5-7,10-14,16-18
Industrial applicability (IA)	Yes:	Claims	1-20
	No:	Claims	

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
se separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document:

D1: EP-A-202833

2. The document D1 is regarded as being the closest prior art to the subject-matter of claims 1-20 (cls. 1-9: solvent extraction composition and cls. 10-20: process for the extraction of a metal) and discloses solvent extraction compositions and their use in a process for extracting a metal such as copper from aqueous solutions, wherein the extractant composition comprises 5-nonyl-2-hydroxy-benzaldoxime or 5-nonyl-2-hydroxy-acetophenone oxime "in admixture with a highly-branched C10-C30 ester as modifier" in a water immiscible organic solvent (see examples 6-8; claims 1,8-11). This disclosure shows all the compositional aldoxime, ketoxime and ester features of claims 1-20 except the explicit, individualised teaching (or an example) of particular "hydroxy"-ester modifiers, i.e. ester compounds substituted with a hydroxy group.

However, D1 mentions "expressis verbis" that useful ester modifiers optionally may contain other functional groups, "more particularly a hydroxyl group" (see page 10, lines 19-21). This teaching is regarded as taking away the novelty and inventive step of all the claims which do not specify the hydroxy-ester compound in more concrete wording other than the vague and broad generic terms as presently found in claims 1-3,5-7,10-14 and 16-18.

It follows that the subject-matter of claims 1-3,5-7,10-14 and 16-18 does not fulfill the requirements of Articles 33(2) and 33(3) PCT.

On the other hand, since the prior art does not contain an individualised teaching to the use and technical effect of hydroxy esters as modifiers, and taking into account that the example of the present application shows improved extraction results, it follows that the subject-matter of claims 4, 8, 9, 15, 19 and 20 is novel and inventive in the sense of Articles 33(2) and 33(3) PCT.

Re Item VII

Certain defects in the international application

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.

Re Item VIII

Certain observations on the international application

It is clear from the description on page 3 that the following features are essential to the definition of the invention:

- (1) the hydroxy-esters have the Formula (2)
- (2) the hydroxy-esters are branched chain aliphatic or aromatic-aliphatic esters containing from 5 to 51 carbon atoms

Since independent claims 1 and 10 do not contain these features they do not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

At least claims 1 and 10 are not supported by the description as required by Article 6 PCT, as their scope is broader than justified by the description and examples. The reasons therefor are the following: the few examples of useful particular ester compounds mentioned on page 5, lines 1-4 and the only one concrete example given on page 13 (hydroxy-ester is 2,2,4-trimethyl-1,3-pentanediol mono-isobutyrate) throw serious doubts on the assumed usefulness of any hydroxy-ester falling within the excessively broad and indefinite wording of claims 1 and 10.

PCT

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference SMC 60328/WO	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 99/ 03807	International filing date (day/month/year) 16/11/1999	(Earliest) Priority Date (day/month/year) 12/12/1998
Applicant AVECIA LIMITED et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

COMPOSITION OF OXIME AND HYDROXY-ESTER FOR THE SOLVENT EXTRACTION OF METALS

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

National Application No.
PCT/GB 99/03807

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C22B3/26 C22B3/30 C22B15/00 C01G3/00 C07C251/00 C07C69/68 C07C69/78		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C22B C07C C01G		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 28454 A (HENKEL CORP) 2 July 1998 (1998-07-02) claims 5-15, 25-29, 31, 32	1-3, 5, 10-14, 16
X	EP 0 202 833 A (ICI PLC) 26 November 1986 (1986-11-26) cited in the application page 7, line 5 - page 9, line 17 page 10, line 15 - line 21; example 6 page 30; claims 1, 9-14	1-3, 5-7, 10-14, 16-18
Y		4, 8, 9, 15, 19, 20
X	US 5 470 552 A (KORDOSKY GARY A ET AL) 28 November 1995 (1995-11-28) column 4, line 34 - column 6, line 15 column 6, line 37 - line 38; claim 1 -/-	1-3, 5, 10-14, 16
<div style="display: flex; justify-content: space-between;"> <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex. </div>		
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Date of the actual completion of the international search	Date of mailing of the international search report	
8 February 2000	16/02/2000	
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3018	Authorized officer Bombeke, M	

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/03807

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 200 104 A (ZUERNER EDWIN C ET AL) 6 April 1993 (1993-04-06) claim 3	4, 8, 9, 15, 19, 20
Y	US 4 678 563 A (KEYS ROBERT O) 7 July 1987 (1987-07-07) column 5, line 33 - line 38; claims 1, 11	4, 8, 9, 15, 19, 20
Y	EP 0 416 822 A (HULS AMERICA INC) 13 March 1991 (1991-03-13) page 5, line 19 - page 6, line 33	4, 8, 9, 15, 19, 20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 99/03807

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9828454	A	02-07-1998	AU 7873998 A EP 0958390 A	17-07-1998 24-11-1999
EP 0202833	A	26-11-1986	AT 60368 T AU 583120 B AU 5749786 A BR 8602237 A CA 1265503 A ES 555037 A FI 862020 A,B, IE 59202 B JP 2021992 C JP 7059728 B JP 61272328 A MX 171147 B NO 861943 A,B, PH 23465 A PT 82592 A,B US 4978788 A US 5176843 A US 5281336 A YU 80686 A ZM 4786 A ZW 10186 A	15-02-1991 20-04-1989 20-11-1986 13-01-1987 06-02-1990 16-07-1987 17-11-1986 26-01-1994 26-02-1996 28-06-1995 02-12-1986 05-10-1993 17-11-1986 07-08-1989 01-06-1986 18-12-1990 05-01-1993 25-01-1994 31-12-1988 29-09-1986 23-12-1987
US 5470552	A	28-11-1995	AU 609615 B AU 3628989 A CA 1338345 A FI 892628 A,B, FR 2632658 A GR 89100311 A,B JP 2064026 A NO 892455 A	02-05-1991 21-12-1989 28-05-1996 15-12-1989 15-12-1989 11-05-1990 05-03-1990 15-12-1989
US 5200104	A	06-04-1993	CA 2082377 A,C US 5397496 A US 5464556 A US 5198143 A	09-05-1993 14-03-1995 07-11-1995 30-03-1993
US 4678563	A	07-07-1987	AT 69397 T AU 579241 B AU 5719086 A BR 8602050 A CA 1265263 A DE 3682426 A EP 0201450 A PH 23083 A	15-11-1991 17-11-1988 13-11-1986 06-01-1987 30-01-1990 19-12-1991 12-11-1986 10-04-1989
EP 0416822	A	13-03-1991	US 5006585 A AU 628221 B AU 6214590 A CA 2024535 A,C DD 299174 A DE 69025832 D DE 69025832 T DE 69031923 D DE 69031923 T EP 0673916 A	09-04-1991 10-09-1992 14-03-1991 06-03-1991 02-04-1992 18-04-1996 07-11-1996 12-02-1998 03-09-1998 27-09-1995

INTERNATIONAL SEARCH REPORT

Information on patent family members



International Application No

PCT/GB 99/03807

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0416822 A		IE 76915 B	05-11-1997
		JP 1986154 C	08-11-1995
		JP 3118349 A	20-05-1991
		JP 6088951 B	09-11-1994
		KR 9606549 B	17-05-1996
		MX 9205271 A	31-03-1994
		US 5039728 A	13-08-1991
		US 5153342 A	06-10-1992